

## **STATUS OF NON ENVIRONMENTAL ACTIVITY IN 2005-2006**

### ***Background:***

Non-environmental activity include “sensitive use” programs operated by governmental or non-profit organizations for national defense, homeland security, law-enforcement, humanitarian operations and programs approved for “episodic use” because of potential risk of loss of life such as expeditions and yacht races. Technical programs dedicated to operate, test or improve the system and to design and produce users platforms are not included in the non-environmental activity.

Since the 37<sup>th</sup> Operations Committee meeting, in order to satisfy the request of breaking down the analysis of non environmental activity in several categories, it was proposed to use the same measurement units which have been used in the Argos system for a long time : the transmitting platforms calculated as PTT-days cumulated and averaged on a period of time (= numbers of PTTs transmitting every day and averaged over one month, quarter, etc) and the active platforms defined as the number of platforms seen at least once in a month.

At the 38<sup>th</sup> Operations Committee meeting, it was decided (action item 38-4 N/C) to develop a metric and mechanism to calculate the percentage of the Argos system capacity used by the non environmental applications and to assess that it remains within the 5% ceiling. The proposed measurement unit is the Erlang and the percentage is calculated on the basis of a Argos 2 instrument capacity of 11 Erlangs which guarantees a minimum 50% elementary probability of reception.

### ***Non environmental activity in 2005-2006***

Over the year 2005, the averaged percentage of system use by programs included in the sensitive use category has been **1.37%** of the system capacity.

The tables give for 2005 and the first quarter of 2006 the use in transmitting and active platforms for non-environmental applications and the resulting number of transmitting days per month. It shows an increase mainly in the homeland security and humanitarian operations and also that the active platforms in these applications are transmitting very differently : 24 days per month on average in homeland security while only 2 in humanitarian operations.

In 2006, the average number of non-environmental transmitting platforms is **817**, while the average number of non-environmental active platforms is **1395**. On average, the non-environmental platforms are transmitting **17 days** per month.

The two following pies gives the breakdown of activity between non-environmental applications : episodic, homeland security, law enforcement, humanitarian operations for 2006 in operating (transmitting every day) and active (seen at least once in a month) platforms.

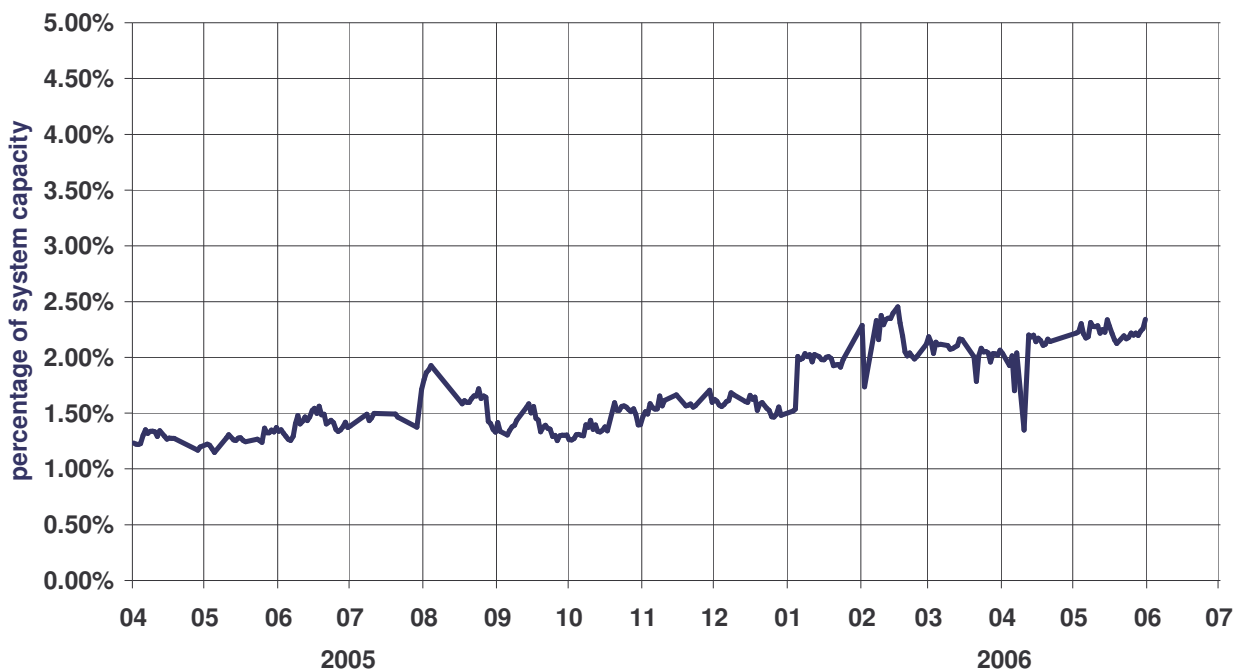
Humanitarian operations is now the most important non environmental application in active platforms with **528** active platforms (38%) while homeland security remains the most important in operating platforms with **473** operating platforms (57%). This is due to the important difference in transmitting days per month and per category, with 10 days/month for humanitarian operations versus 30 days/month for homeland security. For the first quarter of 2006, the average number of transmitting platforms for the entire Argos system is **8590**, while the average number of active platforms is **15682**.

The maps give the system occupancy on **April 19<sup>th</sup>, 2006** for a period of 12 hours allowing all transmitting platforms to be viewed by all satellites. The first map shows the entire Argos system occupation with **8186** platforms using **2.26** Erlang, i.e. **20.5%** of the system capacity. The maximum activity is observed in South Asia with approximately 6 Erlang. The second map shows the sensitive non environmental activity on the same day with **650** platforms using **0.17** Erlang and a maximum of **1.00** Erlang in Western Europe and South Asia.

As agreed, the sensitive non environmental activity is measured weekly on a 12 hours period, and the results for 2006, until end of May, are given in the following graph and table.

Week	All Platforms (Erlang)	Sensitive use (Erlang)	Percentage of system capacity
1	2.16	0.167	1.52%
2	2.17	0.221	2.01%
3	2.13	0.218	1.98%
4	2.03	0.210	1.91%
5	2.26	0.251	2.29%
6	2.23	0.256	2.33%
7	2.20	0.258	2.35%
8	2.18	0.221	2.01%
9	2.24	0.233	2.12%
10	2.19	0.233	2.12%
11	2.16	0.232	2.10%
12	2.05	0.221	2.01%
13	2.15	0.215	1.96%
14	2.15	0.215	1.96%
15	1.98	0.212	1.93%
16	1.41	0.148	1.35%
17	2.18	0.237	2.15%
18	2.32	0.244	2.22%
19	2.30	0.254	2.31%
20	2.30	0.257	2.34%
21	2.29	0.241	2.19%
22	2.28	0.246	2.24%

Non Environmental Use in percentage of the system capacity



Average percentage of system capacity used by sensitive applications in 2006 :  
2.06%



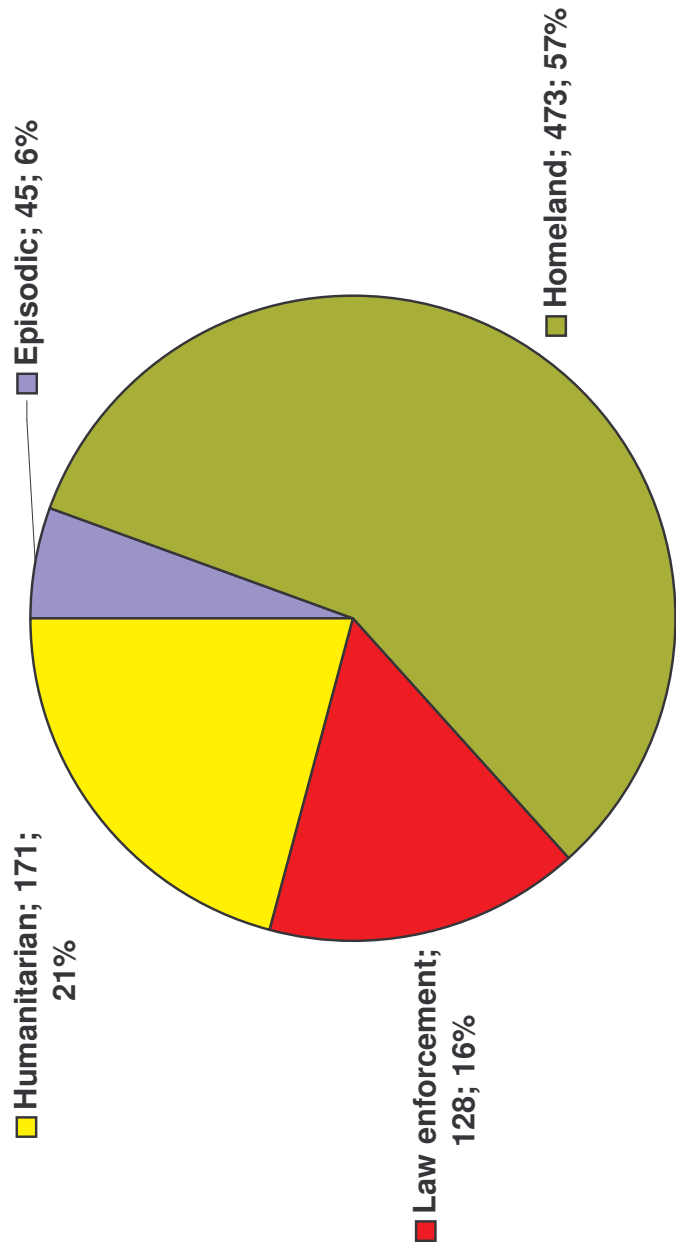
### Monitoring of non-environmental activity in 2005

Quarters	Episodic	Homeland	Law enforcement	Humanitarian	Total
2005/1	23	357	107	10	496
2005/2	18	400	120	12	549
2005/3	38	436	123	17	614
2005/4	39	408	116	19	581
2005 operating platforms	29	400	116	14	560
2005 active platforms	63	412	253	318	1046
Transmitting days per month	13.9	29.1	13.8	1.4	16.1
2005/2004 increase	8.6%	55.5%	12.6%	-45.2%	35.3%

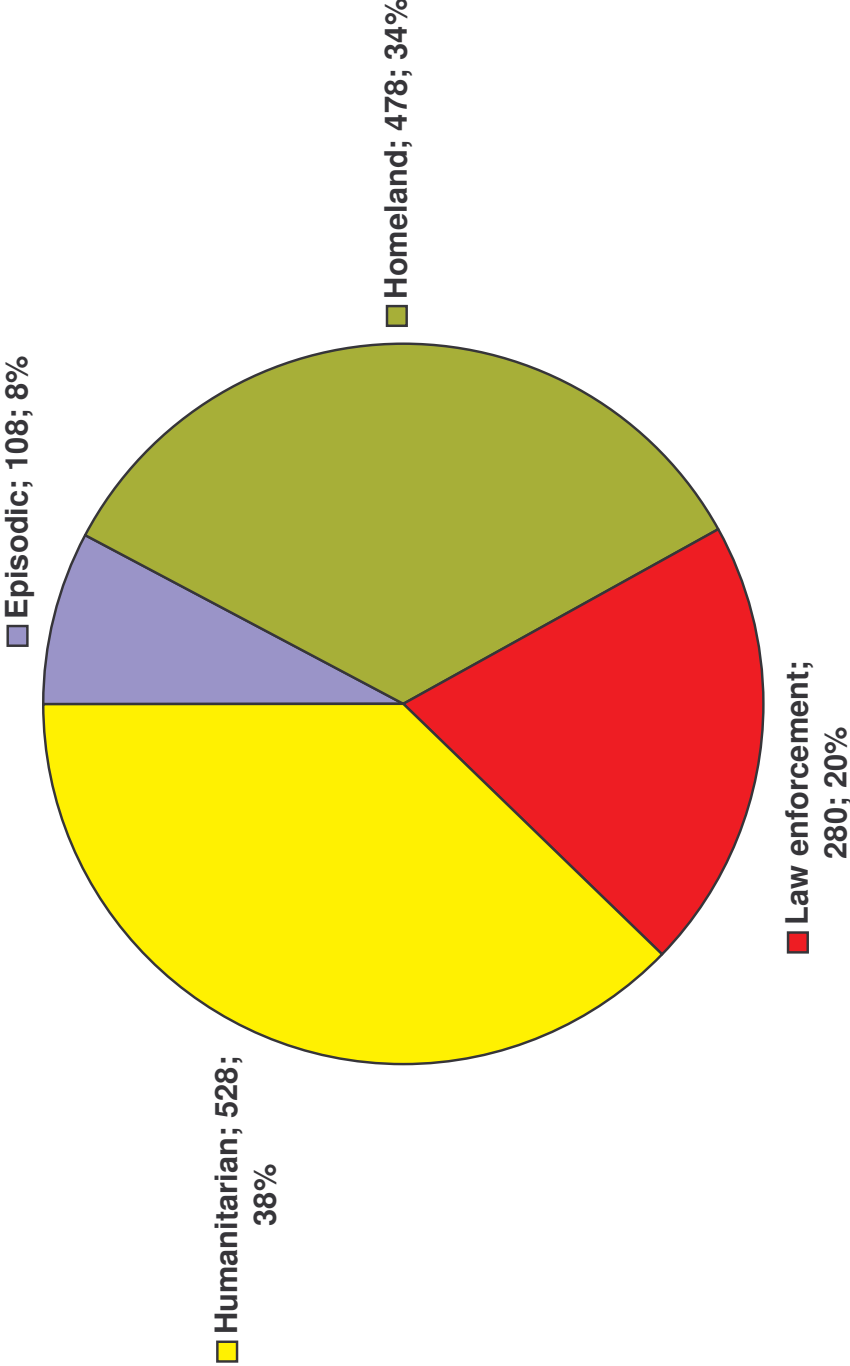
### Monitoring of non-environmental activity in 2006

Quarters	Episodic	Homeland	Law enforcement	Humanitarian	Total
2006/1	45	473	128	171	817
2006/2	0	0	0	0	0
2006/3	0	0	0	0	0
2006/4	0	0	0	0	0
2006 operating platforms	45	473	128	171	817
2006 active platforms	108	478	280	528	1395
Transmitting days per month	12.5	29.7	13.7	9.7	17.6

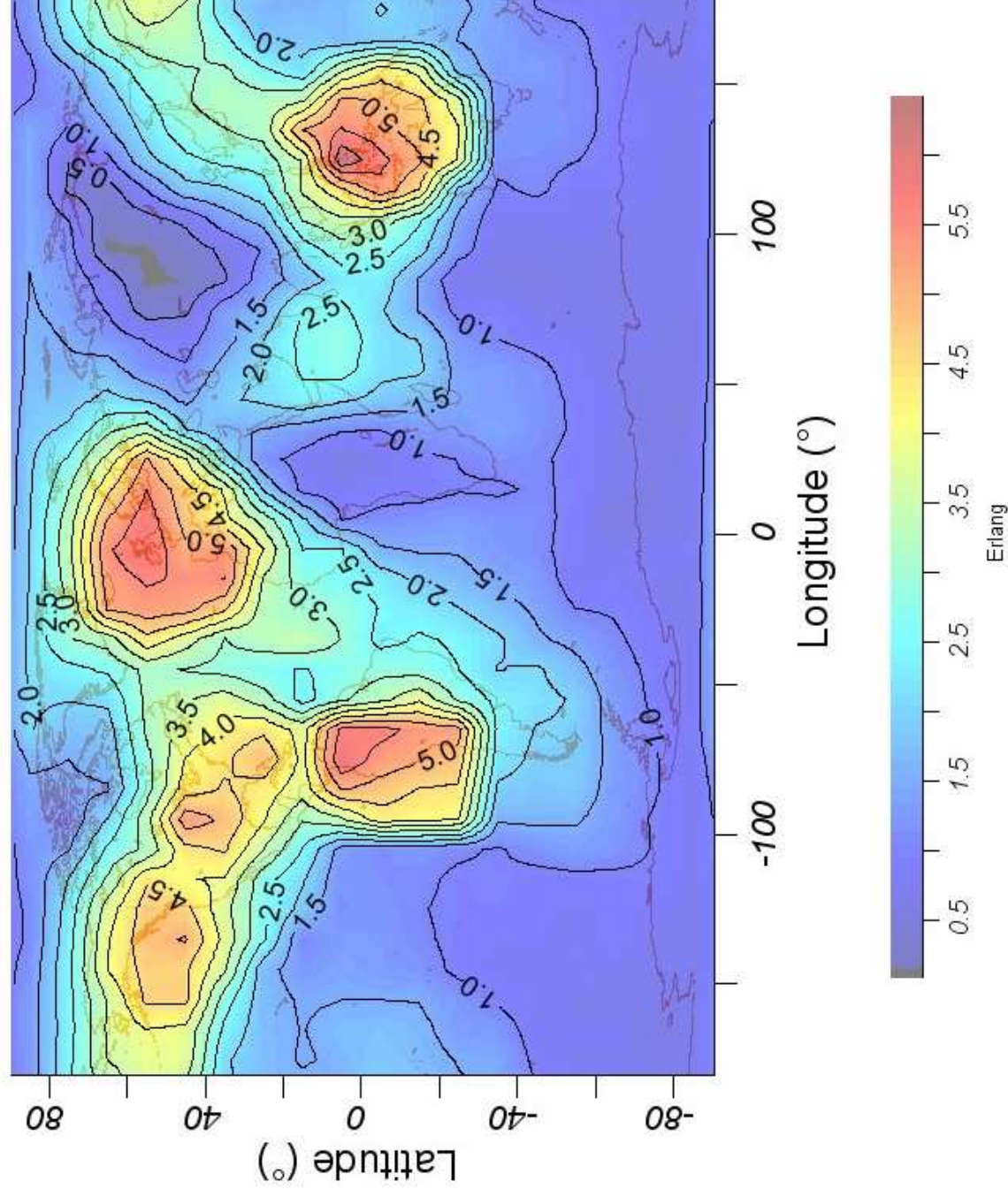
**2006 Non environmental activity in OPERATING platforms**  
(Total NE = 817, Argos = 8590)



2006 Non environmental activity in ACTIVE platforms  
(Total NE = 1395, Argos = 15682)



# System occupancy (All) 2.26 Erlang (2006/04/19) NB: 8186





# System occupancy (SU\_NENV) 0.17 Erlang (2006/04/19) NB: 650

